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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/738,395

12/17/2003

Isamu Okabe

TWA96USA

7992

270

7590

10/05/2006

HOWSON AND HOWSON
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EXAMINER

CHARLES, MARCUS

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/738,395

Applicant(s)

OKABE ET AL.

Examiner

Marcus Charles

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>06-28-04* & 12-15-05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is the first action relating to application number 10/738,395 filed 12-17-2003. Claim 1 is currently pending.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The examiner has accepted the drawing filed with this application as formal drawing.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP (55-40349) in view of Suzuki et al. (6,234,928) and Takahasi et al. (5,489,324). JP (55-40349) discloses a pawl (12) that is made of sintered alloy but fails to disclose the density of the alloy and the pawl in combination with a tensioner. Suzuki et al. disclose a ratchet tensioner comprising a housing (7) having a plunger (8) slidable in and protruding from a direction from the housing via a spring; a ratchet mechanism comprising a rack (T) formed on the side surface of the plunger; a pawl (16) provided on the housing and engageable with the rack thus preventing return movement of the

plunger. Suzuki et al. fails to disclose the pawl is made from sintered alloy. Therefore, it would have been obvious to one of ordinary skill in the art to modify the pawl of JP (55-40349) so that it can replace the pawl of Suzuki et al. in order to reduce the weight and manufacturing cost of the combined system. In addition, Takahasi et al. discloses a an iron base sintered alloy having a density of 6.8-7.0 g/cm³ and composed and consisting of 2-10% molybdenum (col. 3, lines 50-61), 2-15 % of Co, and the balance of iron (Fe) impurities. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the sintered alloy pawl JP (55-40349) of to include the iron base alloy materials as taught by Takahasi et al. to improve wear and seizure resistance, corrosion resistance, oxidation resistance and pitting.


Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Suzuki (6,478,703 and 5,006,095) discloses a ratchet tensioner. Serino et al. (4,268,309) disclose an iron base sintered alloy having a density of 7.3 g/cm³. Ishijima et al. (5,545,487), JP (2001-348654), JP (2001-81505), JP (09-157806) and JP (08-218104 discloses a sintered alloyed material. Okabe et al. (2003/0228949) discloses a sintered alloy base sprocket.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ridley Richard can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Marcus Charles
Primary Examiner
Art Unit 3682
September 25, 2006